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United States Patent [19][11] **Patent Number:** **5,878,206****Chen et al.**[45] **Date of Patent:** **Mar. 2, 1999**[54] **COMMIT SCOPE CONTROL IN
HIERARCHICAL INFORMATION
PROCESSES**[75] Inventors: **Qiming Chen**, Sunnyvale; **Umeshwar
Dayal**, Saratoga, both of Calif.[73] Assignee: **Hewlett-Packard Company**, Palo Alto,
Calif.[21] Appl. No.: **823,704**[22] Filed: **Mar. 25, 1997**[51] Int. Cl.⁶ **G06F 11/14; G06F 17/30**[52] U.S. Cl. **395/182.17; 707/10; 707/202;
707/203**[58] Field of Search **395/182.13, 182.14,
395/182.17, 182.18; 707/201, 202, 203,**
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Primary Examiner—Ayaz R. Sheikh*Assistant Examiner*—Sumati Lefkowitz[57] **ABSTRACT**

An information system that enables a child transaction to broaden the visibility of its data updates to a wider scope than the scope of its parent transaction thereby enhancing concurrency but without sacrificing protection in that scope. The information system provides scoped transactions and provides failure handling in hierarchical information processes that contain scoped transactions.

18 Claims, 7 Drawing Sheets